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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,804	03/29/2004	Chang-Rong Wu	WUCH3037/EM	9777
23364	7590	09/13/2005	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			TOLEDO, FERNANDO L	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,804

Applicant(s)

WU ET AL.

Examiner

Fernando L. Toledo

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Specification

1. The SUMMARY OF THE INVENTION from pages 4 and 5 is a verbatim copy of the claims. This does not meet the objectives of the summary in 37 CFR 1.73 which states that “A brief summary of the invention indicating its nature and substance, which may include a statement of the object of the invention, should precede the detailed description.” A further elaboration of this is given in MPEP 608.01(d) which states “Since the purpose of the brief summary of invention is to apprise the public, and more especially those interested in the particular art to which the invention relates, of the nature of the invention, the summary should be directed to the specific invention being claimed. That is, the subject matter of the invention should be described in one or more clear, concise sentences or paragraphs.” Claims are written in legal language to specify in broad terms the legal limitations of the invention, and are not intended to provide technical information to the public about the nature of the invention.

The first paragraph of 35 U.S.C. 112 states that “The specification shall contain a written description of the invention, and of the manner an process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains”. The legal language utilized for claims to set the metes and bounds of the patent protection does not fulfill this requirement. In addition, 37 CFR 1.75 (d) sets up the criteria that the specification is a dictionary for the claims and should provide clear support or antecedent basis for all terms used in the claims. Since the SUMMARY OF THE INVENTION merely duplicates the claims, it is not providing support for the claims.

The second paragraph of 35 U.S.C. 112 states that "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention". Since the claims are given at the end of the specification, it is redundant and superfluous to include them as part of the summary.

Since rules 37 CFR 1.73 and 37 CFR 1.75 clearly identify the SUMMARY OF THE INVENTION as a section which is separate and distinct from the CLAIMS and the other sections, the intended objective was not to provide an exact copy of the claims in the SUMMARY.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 – 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's Admitted Prior Art (AAPA).

4. In re claims 1 and 4, AAPA discloses providing a semiconductor substrate 12; forming a pad oxide layer 14 on the semiconductor substrate 12; forming a pad nitride layer 16 on the pad oxide layer 14; forming a BPSG layer 18 on the pad nitride layer 16; forming a borosilicate glass layer 20 on the BPSG layer 18; and forming deep trenches through the borosilicate glass 20, the BPSG layer 18, the pad nitride layer 16, the pad oxide layer 14 and into the semiconductor substrate 12 (Figure 2).

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5. In re claim 2, AAPA discloses further including performing an annealing process between steps of forming the borosilicate glass layer and the deep trenches (page 2, line 4).

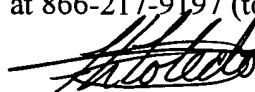
6. In re claim 3, AAPA discloses further including utilization of vapor hydrogen fluoride to etch the borosilicate glass layer and the BPSG layer in an anisotropic manner (page 2, last paragraph).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fernando L. Toledo whose telephone number is 571-272-1867. The examiner can normally be reached on Mon-Thu 7am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Fernando L. Toledo
Examiner
Art Unit 2823